

Chapter 9

Getting Out the Word

I knew when I joined NRDL that my basic job was to build an engineering organization that could produce practical stuff for the Navy out of the scientific research that was going on in the rest of the Laboratory. The Buships brass was worried that otherwise the Laboratory would generate tons of fragmentary information that wouldn't be very useful. Well, we did do that, as I will tell you about in later chapters. But, as the saying goes, a funny thing happened on the way there; something that I should have known was bound to happen.

I had been at the Lab only a few weeks being toured and introduced to people and getting to know the small group I found waiting for me in the Engineering Applications Section, which was to be my very own, when I was advised that AFSWP had asked NRDL to prepare a book to be called "Radiological Defense, Vol. II" and that I had been selected to do it. In fact, it was to be one of the main tasks of my section for the next two years. AFSWP, incidentally, was the Armed Forces Special Weapons Project, the nuclear arm of the National Military Establishment, which in turn was the precursor of the Department of Defense.

I guess the reason that NRDL got the job was that we were the only military group with the term, "radiological defense" in our name—and I got the job because no one else wanted it after they read the specifications. The proposed subtitle of the book was, "The Principles of Military Defense against Atomic Weapons." AFSWP gave no hint as to what those principles might be but they did list the topics to be covered and it was quite a list. Actually, I may have been the logical person for the job because my essay-writing for the US. Naval Institute had given me a reputation for being able to communicate technical ideas in ordinary language. I was particularly interested in connecting the working Navy with the new environment of the Nuclear Age.

About the time I transferred to NRDL, I submitted an essay to the Naval Institute entitled *The Naval Officer and Tomorrow's Navy* and it was accepted for publication. It was published in March 1949. Shortly, I received the following letter, which had been read by the CO and the Scientific Director on its way down to me:

OFFICE OF THE SUPERINTENDENT
UNITED STATES NAVAL ACADEMY

Personal

10 March 1949

Dear Mr. Strobe:

I have just finished this morning your article, THE NAVAL OFFICER AND TOMORROW'S NAVY, in the NAVAL INSTITUTE PROCEEDINGS. I congratulate you on a brilliant and perceptive paper.

The March PROCEEDINGS appeared to me to be a particularly effective issue and one that comes up more closely to the JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTE than any previous number I have seen. It is such articles as yours that serve to raise the stature of the Navy's professional publication to a point worthy of the Service it represents.

I have asked the Naval Institute to send complimentary copies of the March issue to all the members of the Armed Services Committees in the Congress. I also intend to make the issue available, with particular reference to your paper, to the members of the Board of Visitors this spring.

With best wishes, Mr. Strobe, I am

Sincerely yours,

J. L. Holloway, Jr.
Rear Admiral, U.S. Navy
Superintendent

One of the first things I did after being assigned the task of writing *Radiological Defense, Volume II* was to take a trip back to Washington to talk to my new sponsors in AFSWP. A trip to Washington was a major event in those days. Dee Jay would drive me down to Moffat Naval Air Station where there was a NATS terminal. NATS meant Naval Air Transport Service. There one would get on a DC-3 or equivalent aircraft and take off in the early morning. The planes were strictly military. Some had passenger-style seats but more than once I rode across the country sitting on webbing along the walls of the plane. After six hours in the air, the plane would land at Olathe Naval Air Station in Kansas to refuel. An hour later, we would be off again. Five hours more and we would be landing at Patuxent Naval Air Station on the Chesapeake Bay. A Navy bus would take the passengers into Washington in the dark of evening. Getting back to California was the same torture in reverse.

I remember one such trip because of an incident that occurred. It was a "red-eye" flight that left the NATS terminal at Moffat in the evening and arrived at Patuxent bright and early the next morning. The plane had web seats along each side with newly installed seat belts at each position. Above each position was a pair of earphones on a hook. If one put on the headset, one could listen to the pilots talking to whomever. Most of the time there was only silence. I put on the headset and dozed off. I roused when the pilot raised the Olathe tower. There's no traffic, said the tower, so come on in. I looked out the window and saw ahead a brightly lit runway and the white and blue rotating lights of a tower. The plane lost altitude and we landed softly. The pilot came back on the air asking the tower what parking ramp to use. "Where are you?" asked the tower. "I'm on the ground," replied the pilot. "You may be on the ground," said the tower, "But you're not at Olathe!" Just then an Air Force blue jeep arrived with a big sign on its rear that said FOLLOW

ME. It seems that there is an Air Force base only nine miles from Olathe Naval Air Station and our navy lads had just made an unauthorized landing. We sat around for an hour and a half while the USAF grilled our flight crew. They returned with hangdog looks and flew the few miles to Patuxent. We were late getting to Patuxent.

That did not happen on my first trip East. The bus from Patuxent deposited me at the Hotel Roger Smith (which no longer exists) at a reasonable hour. The next morning I walked down 17th Street to the temporary mall buildings (which no longer exist) and visited my former coworkers in Preliminary Design. Nothing seemed to have changed except that John Niedermair had hired as my replacement a newly graduated Webbie, Jim Dapper. I spent most of the morning talking to Woody Armstrong and Mike Kearns about our experimental program on ship decontamination, which is the subject of Chapter 10. My appointment at AFSWP was in the afternoon. I found my way to the AFSWP office in the Pentagon and shortly found myself talking to Dr. Herbert “Pete” Scoville. In my recollection, Pete was not the technical director of the agency at the time although he assumed that lofty position shortly thereafter. Pete had been a radsafe monitor at Operation Crossroads. I do not recall meeting him there. He seemed familiar with my report on the blast damage to ships as well as my later analysis of the fallout pattern after the underwater burst.

It was clear to me that Scoville was the person at AFSWP who was most interested in *Radiological Defense, Volume II*, and probably he had started the project. When I asked, it turned out that Volume I of the series was a collection of radsafe reports, monographs and guidelines prepared by and for the monitors at Operation Crossroads, edited by none other than Pete Scoville. At least that is what I have been told. I have never seen a copy of that volume and neither have most of the holders of Volume II. Preparation of Volumes III and IV of the series were also underway. Volume III was to cover the medical aspects of atomic warfare and Volume IV was to cover radiac instruments. Volume IV is the only one that I have seen. It is a catalog of radiation measurement instruments available to the military at the time.

I had with me a draft outline of my volume based on what I had gleaned from the official correspondence. The first six chapters were to cover atomic weapon effects from the historical experience and nuclear physics through the various delivery conditions (air, surface, or underwater) to the damage effects of blast, thermal pulse, and radiation on structures and people. Next came chapters on detection of radiation and how to conduct surveys of radioactivity in the field, followed by guidance on protection of personnel and decontamination. Finally, I proposed to put this all together by presenting concepts on how to organize and prepare for military defense against atomic attack. I wasn’t too sure at the time what these concepts might be but I was confident they could be developed.

This outline of the volume proved acceptable. Scoville also wanted a chapter on radiological warfare—the use of radioactive materials as antipersonnel agents, like chemical and bacteriological agents. He also wanted a chapter on training. That all seemed reasonable and I returned to San Francisco satisfied that I knew what the sponsor wanted. I selected a team to help me write the book. Dick Laurino proved very effective

early on. As soon as possible I hired two editor-writers, Lew Horvath and Fred Goshe, to flesh out the project staff. Soon, we were churning out the chapters at a great rate.

Publish or Perish

Although *Radiological Defense, Volume II*, was our major opus, we had other sponsors to respond to. I had a natural urge to publish and found many “nuggets” that deserved to be in print. NRDL’s publications policy was in its infancy when I arrived. All technical papers received peer review within the Lab. All published papers were given a number preceded by the letters “AD,” which I discovered eventually was the librarian’s shorthand for “accession document” number. This number was assigned when the draft entered the review process but the date of the report was when review was complete and approval obtained. My first NRDL report was AD-77, “A Review of the Radioactive Waste Disposal Problem from the Military Viewpoint.” Sounds like a winner, doesn’t it? I submitted it not too long after I arrived at the Lab but its date of approval was May 1949. Apparently, it took some time for the top nerds to get used to this sort of technical discussion. My second effort, “Physical Damage to Ships and Marine Installations,” was AD-110, yet its date is April 1949, one month earlier than the first one. These reports were of direct interest to the military and they formed the basis for some material in *Volume II*.

As I look back on my first publications at NRDL, I realize how pedestrian some of them now appear. But the demand for information—any reasonably reliable information—on the atomic bomb and atomic defense was overwhelming during the late forties and early fifties. This was true not only in the armed services but also in the public at large. Governors and mayors were very concerned about civil defense, especially after the Soviets detonated an atomic device successfully. As an example, I gave a talk in August 1950 to a group of shipyard executives who were taking a summer course in Heavy Industry Management at the University of California in Berkeley. There must have been at least several dozen other lectures going on at the same time on campus. Yet the next day’s Oakland Tribune carried a three-column story headlined “Effect of Atomic Attack On Oakland Is Pictured.” The San Francisco Examiner carried a much shorter story on that talk of mine headlined, “Atomic Casualties Can Be Cut 90 Per Cent, Expert Says.” There were even two column-inches in the Los Angeles paper. I hadn’t realized that a reporter was in the audience!

The talk at Berkeley was not the first I gave on the subject of atomic defense. When requests for speakers came to the Lab, there was a tendency to turn in the direction of my Branch because we were the least nerdy part of the Scientific Department. Other parts of the Lab undoubtedly did their share but practically from the time I joined I averaged perhaps a half dozen speaking engagements each year.

The Effects of Atomic Weapons

On May 24, 1949, a letter addressed to me from Dr. Joseph O. Hirschfelder at Los Alamos Scientific Laboratory arrived in my In basket. The letter, addressed to Dr.

Walmer Strobe at NRDL, was dated April 26. Where had it been for the past several weeks? All mail arriving at the Lab was opened in the mail room and routed through the “head shed” on its way to the action individual. But such delay was unusual to say the least. It was doubly troubling because of the letter’s content:

Dear Dr. Strobe:

As indicated in the attached memorandum, we are requesting a few outstanding experts to review parts of the proposed Atomic Weapons Handbook. The final draft will be revised in accordance with the criticism which we receive.

I would appreciate it very much if you would review the enclosed manuscript at your convenience and send me your comments. Because we are pressed for time, it will be necessary for us to start preparing the final draft on June 1st.

I believe that the publication of this treatise is extremely important and because we expect it to be officially sanctioned by both the Atomic Energy Commission and the National Military Establishment, we are particularly anxious to have the material technically correct and presented in a fashion which is clear and not misleading.

Thank you for your trouble in this matter.

Sincerely,

Joseph O. Hirschfelder
Senior Editor

The attached memo for reviewers explained that the AEC had asked Los Alamos to prepare an unclassified handbook on atomic weapon effects and that Dr. Joe Hirschfelder, Arnold Kramish, LCOL David Parker, and Ralph Carlisle Smith had been asked to edit the publication. There had been some discussion in the newspapers the previous summer of the need for such a handbook but since then it had dropped out of sight. Needless to say, my writers and I took up the review of what was labeled Chapter V on an urgent basis. I was able to send it off to Dr. Hirschfelder on June 8th. While we were doing the review, I received two more chapters for review. I think these letters requesting review were the first received by NRDL.

How did Hirschfelder get my name rather than Aitch Sullivan’s? I thought of my trip months earlier to AFSWP. Scoville could have given Los Alamos my name, knowing what my assignment was. Why hadn’t he told me about the Los Alamos effort? Surely, he had known about it. The only explanation I could come up with was one of security. The Los Alamos book was intended to be unclassified and available to the public. Our book was intended for the armed forces and probably would be classified Confidential or

higher. Many of the sources we were using were classified Secret. (RD2, as I called it, ended up classified Restricted, a security classification no longer used. It was the lowest level of security of information. Material marked Restricted had to be kept in a locked drawer, not a safe, and could not be published in the open literature or newspapers.) Although Scoville had probably asked Hirschfelder to send me everything, I had to be sure. After all, if the AEC and the military vouched for what was in it, we had better conform or have a good explanation of the differences. In my covering letter to Hirschfelder on June 8th, I included this paragraph:

You know, of course, that we are writing Radiological Defense Volume II for AFSWP. Our book will be fundamentally operational in character but there will be a slight overlap between your efforts and ours. We are anxious to make our material conform to that in your handbook and to this end a copy of all or any available parts of the handbook would be invaluable to us. Anything you can do to put working copies in our hands at an early date would be greatly appreciated.

Joe Hirschfelder, it turned out, worked for the Naval Research Laboratory at the University of Wisconsin and had been loaned to Los Alamos to be senior editor. We established a good working relationship. He had a hellish job as editor, working with nearly a hundred “experts” located all over the country and he did a fine job. In his reply to my first letter, he said he had sent our comments to the authors for revision and if they disagreed they were to include our comments as footnotes! And to further stroke us, he concluded with this sentence: “Your comments and opinions greatly assist in the job of making this handbook useful, authoritative and accurate.” I really think we played a special role in the production of what became the *Effects of Atomic Weapons* (later renamed the *Effects of Nuclear Weapons*) because we were engaged in writing a similar document.

I ended up as one of the authors of the *Effects of Atomic Weapons*. One letter from Joe Hirschfelder was as follows:

Dear Strobe:

Thank you ever so much for preparation of the account of the contamination of the USS Independence. The tone and contents are exactly what we desired. I appreciate very much your fine cooperation.

Give my best regards to Dr. Sullivan, Commander Fee, and the others.

Sincerely yours,
J. O. Hirschfelder
Senior Editor, ATOMIC WEAPONS HANDBOOK

I kept this piece of correspondence because on the route slip attached there was the comment “Good work, Jerry!” and the initials of Aitch Sullivan, one of the few compliments I got from that source. I note that the date of the letter is September 14,

1949, and was the last I heard from Joe Hirschfelder. A month later, I received a letter from Los Alamos on the subject of the handbook signed by Samuel Glasstone and subsequent correspondence indicated that he had replaced Hirschfelder and the other editors.

I had never heard of Samuel Glasstone myself but his name struck a chord in many of the nerds at NRDL. It seemed he had written an important textbook in physical chemistry that had been used in their studies. Accordingly, his name was uttered with the same sort of awe that Webster's is used in connection with a dictionary. I concluded that Glasstone had been brought into the picture to lend a little *cachet* to the Handbook in the eyes of the scientific community. In one of his letters written after the announcement of the Russian bomb test, Glasstone mentioned that "the Congressional Committee for Atomic Energy is breathing down our necks, and we are anxious to complete the HANDBOOK as soon as possible." Things did drag on though and it was not until the following spring that I received a paper-bound copy of *The Effects of Atomic Weapons* together with a letter from Carroll L. Wilson, the general manager of the AEC, thanking me for my contributions and announcing that the book was scheduled for publication on August 12, 1950. It was a form letter no doubt received by every one of the contributors listed in the Foreword to the book. Hirschfelder was listed too but Glasstone was singled out as *the* editor.

Glasstoned Again

In the summer of 1950, as the Marines were desperately trying to halt the North's invasion of South Korea, we received word from AFSWP that Samuel Glasstone would be arriving to accomplish the final editing of RD2. I was aghast. We had the damn thing about done and besides, I had looked over *The Effects* book and did not think it that great an editing job. What had been done was to divide every chapter into two parts; the first written for the lay person and conveying general results while the technically literate reader was referred to the second part that contained details. I had no way of knowing whether that arrangement was Glasstone's contribution, of course, but none of the draft material had been organized that way. I hoped that approach would not be foisted onto RD2 but I feared the worst.

I had two excellent editors in Lew Horvath and Fred Goshe and several young professionals, such as Dick Laurino, who were very good at presenting complex ideas in an understandable way. It was an insult to send Sam Glasstone to NRDL but I could do nothing about it. The nerds thought I was lucky to be able to sit at the feet of their hero. Shortly, Glasstone arrived but not by himself. He had his wife with him. She, it turned out, did not come to keep house for Sam. She was his helpmeet at work; not a secretary, mind you, but a full-fledged partner. Fortunately, the office I had reserved for Glasstone was large enough for the Glasstones. They sat across from each other at a library table and passed our drafts back and forth. Maybe she edited his stuff.

I do not have any picture in my mind these days of how the Glasstones looked. All I remember is that they were **old**. They were old like my father. (He was in his mid-50s

then.) The net effect of Glasstone and Glasstone was to delay the publication of *Radiological Defense, Volume II* by about six months. (It was eventually published in mid-1951.) Every chapter got the same treatment: no content changes but numerous changes in organization and presentation. I fumed but told my team to accomplish the changes. Only occasionally would I object to Sam that a proposed change would make the meaning inaccurate or misleading. My objections were always accommodated.

Once we had accomplished the changes required by the Glasstones, the revisions would come back with many more changes. We would start revising again. I became restless. We had gotten approval for a new project called Current Status of Countermeasures (CSC) for which we proposed to produce an opus every year to keep the sponsors up to date on the progress of research. We tried to get started on that while fielding the Glasstone revisions. One day, Dick Laurino pointed out to me that the latest batch of revisions brought us back very close to the state of the drafts when the Glasstones arrived. He was right. I bundled up the lot and went to see Paul Tompkins, who was now Associate Scientific Director. I don't know how he did it but shortly the Glasstones departed.

Radiological Defense, Volume II, was published in mid-1951 in beautifully bound navy-blue imitation leather with gold lettering. It got wide distribution in the services and outside. The copy I now have has been declassified and was in the library of the Federal Civil Defense Administration until I liberated it. Inside is a foreword by Brigadier General Herbert Loper, chief of the Armed Forces Special Weapons Project, in which he acknowledges that most of the material was prepared by NRDL with too many contributors to be named individually but that the book was edited by Samuel Glasstone. Glasstoned again!